

# Alameda County Office of Education

**JOB TITLE:** Network Engineer (Range 23 CSEA)

**JOB SUMMARY:**

Designs, installs, maintains and supports computer communications networks and related systems with primary emphasis is on system security, uninterrupted service, and optimization of resources.

**ESSENTIAL DUTIES AND RESPONSIBILITIES:**

Designs and implements network solutions to address business and management problems and requirements for ACOE and its clients.

Creates, designs, drafts, and implements network, desktop, and server policy standards and procedures to accomplish security program in accordance with regulations, compliance requirements, and industry best practices.

Designs, implements, and maintains network security architectures, systems, and devices.

Deploys, configures, and supports security devices and software programs, including firewalls, spam filters, content filters, intruder detection systems, and security sensors.

Identifies, documents, and reports security issues; follows up on action items to resolve security issues; audits and tests security vulnerabilities and verifies security defenses.

Configures and maintains servers based on open source, operating systems, database software, and applications.

Creates and maintains Directory Policy for users, groups, computers, and servers.

Performs network setup, configuration, and upgrades, including routers, switches, and devices, for ACOE and school districts.

Prepares and assists in developing technical instruction documents, troubleshooting instructions, and operational procedures.

Monitors network bandwidth consumption and usage using network monitoring devices and systems.

Trains and provides guidance to other support technicians and team members.

Troubleshoots hardware, software, and network problems and effects/coordinates resolution.

Conveys instructions to employees and clients in a clear and concise manner.

Performs related projects and duties as assigned.

**QUALIFICATIONS** *To perform this job successfully, an individual must be able to perform each essential duty satisfactorily. The requirements listed below are representative of the knowledge, skill, and/or ability required. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

**Ability To:**

Apply theoretic security and capacity concepts to the design and configuration of network and related systems.

Translate business requirements into appropriate network solutions.

Audit and test security vulnerabilities and verify security defenses

Setup and configure various network equipment and related systems.

Support Microsoft Windows, Linux platforms.

Setup and support Open Source software such as Apache, TomCat, MySQL

Organize and plan computer systems and network installations.

Communicate effectively orally and in writing.

Manage and prioritize work effectively.

**Knowledge of:**

Network and system security architecture and practices.

Local and wide area networking monitoring devices and systems, such as Intermapper, Microsoft Operations Manager, Ciscoworks, Openview, SNMPc.

Relevant Network Operations Center (NOC) concepts, practices and procedures.

Operating systems, including Linux, Microsoft Windows

Open Source technology, such as Apache Web server, Tomcat app server, My SQL Admin, Sakai, Fedora, JBoss,

Network monitoring software, such as Intermapper, Open view, Ciscoworks, Microsoft windows.

Various anti-virus software packages.

Security auditing techniques.

**Education and/or Experience:**

Bachelor Degree in information technology discipline and four (4) years related experience, which includes a minimum of two (2) years network systems security, design, and configuration; or equivalent combination of education and experience.

**Certificates, Licenses, Registrations:**

Valid California drivers license.

**Desirable:** LPI (Linux Professional Institute) Certification, CLP(Certified Linux Professional), CNE (Certified Network Engineer), MCSE (Microsoft Certified System Engineer), Comptia Security +.

**Language Skills:**

Ability to read and comprehend complex instructions, detailed correspondence, and memos.

Ability to write detailed correspondence. Ability to effectively present information in one-on-one and small group situations to clients and other employees.

**Mathematical Skills:**

Advanced technical mathematics sufficient to understand and support network operating systems.

**Reasoning Abilities:**

Ability to understand complex theoretic system architectures. Ability to apply common sense understanding to carry out instructions furnished in written, oral, or diagram form. Ability to deal with problems involving several concrete variables in standardized situations.

**PHYSICAL DEMANDS** *The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

While performing the duties of this job, the employee is regularly required to use hands to finger, handle, or feel. The employee frequently is required to sit and talk or hear. The employee is occasionally required to stand, walk, and reach with hands and arms. The employee is occasionally required to stoop, kneel, crouch, or crawl. The employee must regularly lift and/or move up to 25 pounds and frequently lift and/or move up to 50 pounds. Specific vision abilities required by this job include close vision, distance vision, color vision, peripheral vision, depth perception, and ability to adjust focus.

**WORK ENVIRONMENT** *The work environment characteristics described here are representative of those an employee encounters while performing the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions.*

While performing the duties of this job, the employee regularly works in inside environmental conditions, works with video display terminals, and moves computer technology equipment and parts. The employee may be required to drive a vehicle in the course of employment, attend evening meetings, travel, and work evenings or weekends. The noise level in the work environment is usually moderate.

**Approved By:**           **Personnel Commission**  
**Approved Date:**       January 15, 2009